

Published in final edited form as:

Acad Med. 2012 November ; 87(11): 1496–1500. doi:10.1097/ACM.0b013e31826d322d.

The Deaf Strong Hospital Program: A Model of Diversity and Inclusion Training for First-Year Medical Students

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Abstract

Recent research indicates that the cultural competence training students receive during medical school might not adequately address the issues that arise when caring for patients of different cultures. Because of their unique communication, linguistic, and cultural issues, incorporating deaf people who use sign language into cultural competence education at medical schools might help to bridge this gap in cross-cultural education. The Deaf Strong Hospital (DSH) program at the University of Rochester School of Medicine and Dentistry, started in 1998, exposes first-year medical students to the issues that are relevant to providing effective patient care and to establishing multicultural sensitivity early in their medical education. Because medical students better acquire cross-cultural competence through hands on experience rather than through lectures, the DSH program, which includes a role-reversal exercise in which medical students play the role of the patients, provides such a model for other medical schools and health care training centers to use in teaching future health care providers how to address the relevant cultural, linguistic, and communication needs of both their deaf patients and their non-English-speaking patients. This article describes the DSH program curriculum, shares findings from both medical students' short-term and long-term post-program evaluations, and provides a framework for the implementation of a broader cultural and linguistic sensitivity training program specific to working with and improving the quality of health care among deaf people.

With the U.S. population becoming increasingly more diverse and strong evidence that racial and ethnic disparities persist in our health care system and in health outcomes, in 2000, the Liaison Committee on Medical Education introduced a standard for cultural

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Supplemental digital content for this article is available at [LWW INSERT LINK].

Other disclosures: None.

Ethical approval: The URMCI institutional review board deemed that both the DSH program and its evaluations are exempt from IRB review because the DSH program is a teaching/educational activity rather than a research study.

competence in medical schools. Faculty and students are expected to “demonstrate an understanding of the manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatments.”¹ Other national medical organizations, such as the Institute of Medicine and the American Medical Association, also recognized the need for increased awareness and understanding of the cultural differences that influence the quality of health care services and treatment.^{2,3}

Cultural competence in our health care and medical education systems typically focuses on cultural sensitivities related to racial, ethnic, and gender factors; yet many medical schools are not sufficiently addressing the pertinent communication and linguistic aspects of cultural competence.⁴ Due to their unique communication and linguistic issues, incorporating deaf people, who are members of every racial and ethnic group, into cultural competence education at medical schools might help to bridge this particular gap in cross-cultural education.

Recent survey research on deaf people’s experiences with the U.S. health care system reflects the consequences of neglecting a misunderstood community. An analysis of the 1990–1992 National Health Interview Surveys revealed that deaf adults who became deaf before age three, similar to other linguistic minority groups, had fewer physician visits and were less likely to have seen a physician in the preceding two years.⁵ In 2006, Steinberg and colleagues conducted focus groups with 91 deaf adults who communicated in American Sign Language (ASL) in three U.S. cities.

Findings from these focus groups indicated that the deaf participants had difficulty communicating, and described their experiences in our health care system with words such as “fear, mistrust, and frustration.” These communication difficulties were mitigated by the presence of experienced, certified interpreters, health care practitioners fluent in ASL, and health care providers who made an effort to improve communication with deaf patients.⁶ In addition to these communication barriers, many deaf people also have cultural perspectives different from those of hearing people, which might have an impact on their experiences with our health care system. For example, a significant portion of deaf adults view the medical and scientific community’s attempt to discover a cure or a “fix” for deafness as a strong rationale for not partaking in health research and services. Health services researchers and providers who are not aware of deaf people’s communication and cultural issues are likely to have difficulty when working with this population.^{7,8}

In an attempt to reduce health disparities for this underserved, linguistic minority population, the Centers for Disease Control and Prevention funded the Rochester Prevention Research Center’s National Center for Deaf Health Research (NCDHR) in 2004, which uses a community-based participatory research approach to bridge the trust gap between the local deaf community and the University of Rochester Medical Center (URMC) to improve the health of deaf and hard-of-hearing people.^{9,10} As a result of this collaboration, NCDHR leaders conducted one of the first health surveys of deaf people who use ASL. Their findings indicated that deaf people in Rochester experience some specific health disparities that are not being adequately addressed by the health care system, including increased cardiovascular risks, intimate partner violence, and suicidal ideation.⁹ Such findings confirmed the urgent need for all health care providers, regardless of location or specialty, to be culturally competent in caring for their deaf patients.

The Deaf Strong Hospital (DSH) program was created in conjunction with URMC and the Deaf Wellness Center in January 1998.¹¹ The DSH program exposes first-year medical students to communication, linguistic, and cultural issues that are relevant to providing effective patient care and to establishing multicultural sensitivity early in their medical

education. Health care providers' increased sensitivity toward and awareness of deaf people's culture and ASL will help to bridge the trust gap between the deaf community and our health care system and will improve deaf people's health outcomes. Furthermore, exposing medical students to deaf people's visual communication needs within the health care context is likely to sensitize medical students to the advantages of using visual communication to help convey complicated health information to patients who are not fluent in English.

This article describes the DSH program curriculum, shares findings from both medical students' short-term and long-term post-program evaluations, and provides a framework for the implementation of a broader cultural and linguistic sensitivity training program specific to working with and improving the quality of health care among deaf people.

The DSH Program Curriculum

Medical student participants

The University of Rochester School of Medicine and Dentistry (URSMD) admits over 100 medical students each academic year. In August 2011, 99 first-year medical students participated in the DSH program. Approximately 22% of these medical students were from minority or disadvantaged backgrounds and 49% were women. A few participants reported having prior exposure to deaf people and ASL, but all were new to the DSH program.

Deaf volunteers

Also in August 2011, we recruited, from the local deaf community, 40 deaf ASL users to participate in the DSH program. We compensated these volunteers for their time.

The DSH program coordinator provided these deaf volunteers with scripts prior to the training exercise. Group leaders, who had previously participated as DSH volunteers, facilitated the training exercise for the new volunteers. We recruited an additional 12 deaf and hearing faculty and staff members from various medical, public health, and cross-cultural/diversity disciplines, along with eight contracted, certificated ASL interpreters to facilitate the small-group debriefing sessions.

Health care scenarios

As communication, linguistic, and cultural barriers are known causes of misdiagnoses that can lead to inappropriate treatment, the DSH program mimics actual health care scenarios. We developed the scripts for the participating students and the semi-structured responses for the deaf volunteers around a fictitious illness scenario to create a potential misdiagnosis or mistreatment as a consequence of these barriers. We have revised and refined these scenarios each year since 2006 to create a maximal learning experience for the participating students. See Supplemental Digital Table 1 [LWW INSERT LINK] for an example of a health care scenario used in 2011.

DSH program format

While the DSH program has changed since its inception to reduce the wait times at each station for participating students, the overall format has remained the same. During the first part of the program, half the students listen to a didactic presentation about deaf people and their experiences in our health care system given by a physician and clinical psychologist, both of whom are deaf. The second half of the students participates in the hands on role-reversal exercise. At the midway point in the program, the two groups switch so both groups participate in both parts of the program before the debriefing session.

Role-reversal exercise

At the beginning of the exercise, each medical student receives a card describing his or her symptoms with instructions on where to seek treatment (see Supplemental Digital Table 1) [LWW INSERT LINK]. While medical students play the role of the patients, they are instructed to communicate with their health care providers (the deaf volunteers) without speaking. The medical students are encouraged to use alternative communication, such as gestures, finger spelling, ASL, or notes written back and forth.

In their role as patients, medical students interact with several deaf “health care providers,” visiting four core stations (a doctor’s office, a psychiatrist, a pharmacy, and an emergency department). After completing each station, students are given a new instruction card with directions to the next station. By the end of the exercise, each student has followed the instructions on five sequential cards, visited four stations, and experienced three waiting areas.

Interpreters are available at only one station so students can compare their ease of discourse using an interpreter with the difficulties they experience at other stations when no interpreter is available. This comparison emphasizes the benefits of effective cross-cultural communication. In each of the waiting areas, the students had to both read the printed material that we gave them and remain vigilant as they waited for the deaf receptionist to fingerspell their names to indicate it was their turn. This setup imitates what many deaf patients experience in real-world waiting rooms when they must monitor the receptionists’ lips as they call their names, making it nearly impossible to read magazines, fill out medical forms, or relax in the waiting area.

Small group debriefing session

At the end of the day, each student attends a small group debriefing session that includes eight to ten students led by a facilitator who is a deaf health care professional or a hearing health care professional with sufficient knowledge of deaf culture and the challenges of cross-cultural communication among linguistic minority populations. The goals of this session are: (1) to encourage the students to share their reactions, frustrations, confusions, and experiences; (2) to help students to appreciate the diversity of the deaf community (or any minority community); and (3) to help students to become sensitive to the challenges faced by patients who might not be fluent in English. We expect students to become frustrated by their inability to communicate with the deaf volunteers and to misunderstand much of the information that those volunteers provide, similar to the experiences of many deaf patients in real-world health care settings.

During these debriefing sessions, the students and facilitators also discuss the literacy barriers associated with the informed consent process. Millions of Americans, not just those who are deaf, face literacy barriers associated with informed consent and medical forms that are written at a 12th grade level or beyond.^{11,12} To provide future health care providers with firsthand experience of these barriers, we developed an informed consent form that is available only in Japanese or Albanian. We ask all students to read, sign, and bring the informed consent form to the debriefing session then to discuss the experience with their small group. A copy of the debriefing session guide and a sample consent form are available from the corresponding author upon request.

Post-Program Evaluations

The URMCI institutional review board deemed that both the DSH program and its evaluations are exempt from IRB review because the DSH program is a teaching/educational activity rather than a research study.

Short-term feedback

Each year, immediately following the DSH program, we administer a satisfaction survey to all student participants. Since 2006, more than 90% of the students “strongly agree” or “agree” that participating in the DSH program helped them to realize the importance of the cultural, linguistic, and communication issues in delivering health care to patients from different cultures. This high degree of satisfaction is comparable to that of other problem-based learning sessions, a common education modality in medical schools.^{13,14}

The program positively affected students’ attitudes and future behaviors when interacting with patients who do not speak English. The majority of students also indicated that they would like to receive more formal training during medical school in addressing the health care needs of linguistic minority populations.

Eighty of the 99 medical students who participated in the DSH program in 2011 described the program as educational, interesting, thought-provoking, and frustrating. Those students who described the experience as frustrating further explained that it was frustrating in a positive way. None described it as boring or useless.

See Supplemental Digital Table 2 [LWW INSERT LINK] for the complete results of our post-program survey (2006–2011).

Long-term feedback

To assess the long-term impact of the DSH program, in early 2012, we contacted past participants who are now in a clinically-oriented stage of their training. Most of the respondents (37/38, 97%) recalled participating and felt that it was a valuable experience. They appreciated being put “in someone else’s shoes” and enjoyed the opportunity to learn about Rochester’s deaf population (36/38, 95%). Because the program is only one day in length, its lasting impact may be limited. Still, many respondents noted that their DSH experiences encouraged them to further explore deaf culture and working with minority populations.

Respondents reported that they apply lessons that they learned from the DSH program in their clinical practice now, including: how to work with interpreters and use non-verbal methods of communications. They applied these lessons not only when caring for deaf patients but also when working with Spanish-speaking patients. Respondents acknowledged the benefit of having an interpreter and the need for proper interpreter etiquette (e.g., talking directly to the patient and using nonverbal cues to connect with the patient). Finally, respondents noted that the DSH program has influenced how they will interact with non-English speaking patients or patients with limited English proficiency, including how they will use interpreters. Some respondents also anticipated future work with deaf population as well as with other minority populations.

Replicating the DSH Program

Based on both these short-term and long-term evaluations, we concluded that the DSH program is an effective, meaningful, and satisfactory educational experience that helps to sensitize future health care providers to the cultural, linguistic, and communication issues that accompany delivering health care to deaf patients, as well as to patients from other cultures who are not fluent in English. Incorporating deaf people who use ASL to communicate in a role-reversal experience highlights the advantages and benefits of visual communication when working with patients with limited English proficiency. The DSH program is a unique model that can be replicated at other medical schools and training centers to improve the quality of health care that future health care practitioners provide to

patients with special cultural, linguistic, and communication needs. In addition, by replicating this program, other medical schools will benefit from the partnerships with the local linguistic minority community that result from recruiting community volunteers.

Benefits and Limitations of the DSH Program

As with many educational or teaching programs, the DSH program has a number of limitations. The absence of a formal longitudinal follow-up prevents us from determining the lasting impact of the program on practice. Our future plans include implementing a formal follow-up survey to evaluate the long-term impact of the DSH program and to gather feedback to determine what changes to make to the curriculum.

The DSH program is typically held within the first two months of the academic year as part of the first-year medical students' Introduction to Clinical Medicine course. It is the students' first clinically-oriented course, which teaches both the fundamentals of communicating with patients and how to develop a doctor–patient relationship. Holding the DSH program early in this course emphasizes the importance of linguistic and cultural competence, bringing cultural issues to students' attention in a safe learning environment before they are exposed to any aspects of the hidden curriculum involving linguistic minorities and the use of interpreters in real-world health care settings.^{15,16}

The DSH program also has helped URSMD revamp one of its medical humanities pathways, now called the Deaf Health Pathway. Courses in this pathway focus on deaf culture, ASL, and providing health care to deaf individuals. Other medical schools that wish to replicate such a program with deaf or other minority populations might choose to offer a similar program, by providing students with further opportunities to integrate cross-cultural training and experience during medical school.

Aside from deaf people, who are members of every racial and ethnic community, Rochester, New York is home to a number of non-English-speaking refugee populations.¹⁷ Students can apply the lessons that they learned from the DSH program to other cultural and linguistic minorities. For example, interpreter etiquette applies in any situation involving an interpreter, whether the involved parties are deaf or not. Participants confirmed the importance of learning interpreter etiquette in their long-term post-program evaluations. In addition, visual and non-verbal communication techniques are valuable and can help to bridge communication gaps when health care providers and patients do not share a common language. Ideally, providers should be well-versed in the cultural backgrounds of their patients. However, it is impractical for medical education and training to cover the wide array of cultures in any given patient population. The DSH program provides one example of how medical education can engage with a minority community and sensitize future health care providers to the general principles relevant to working with non-English-speaking patients.

Results of the long-term post-program evaluation confirm that exposing medical students early in their training to issues that linguistic minorities face in health care settings affects how they engage in patient care during medical school and later on in their careers. Health care providers encounter patients in a broad variety of settings, sometimes under imperfect circumstances. For example, when needed, a qualified interpreter may not always be available. The health care provider who participated in the DSH program is likely to recall some non-verbal communication methods and principles to communicate with the patient in this situation. For example, DSH graduates remembered that such patients should not be expected to know how to read or write in English and that alternative methods of communication exist. They were also aware of their eye contact, body language, and physical space. When using interpreters with non-English-speaking patients, DSH graduates

recalled interpreter etiquette, making additional effort to address their patient directly rather than speaking to the interpreter and ignoring the patient.

The DSH program has also motivated some students to learn more about deaf people and their health care needs. For instance, some choose the Deaf Health Pathway as an elective medical humanities curriculum. Some seek a better understanding of other minority populations in the area, and others realize the benefits of acquiring additional language and communication skills. Some students anticipate working with deaf or other non-English speaking populations in their future medical careers. Future studies of the DSH program will focus on whether first-year medical students retain these lessons and generalize them to other minority populations at later stages of training. For example, we will assess whether or not DSH graduates demonstrate greater cultural competency than students who did not participate in the program.

In Summary

Because medical students better acquire cross-cultural competence through hands on experience rather than through lectures, the DSH program provides such a model for other medical schools and health care training centers to use in teaching future health care providers how to address the relevant cultural, linguistic, and communication needs of both their deaf patients and their non-English-speaking patients. Implementing this program in more medical schools and training centers is likely to improve the quality of health care for deaf people and others who are not fluent in English and to reduce health disparities in these populations.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

Funding/Support: This work was supported by the Centers for Disease Control and Prevention (cooperative agreement #U48DP001910) and the Department of Health and Human Services (National Institutes of Health grant #2T32HL793711). The views expressed in this article are those of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention. Coauthor SRS was also supported by the National Heart, Lung, and Blood Institute (grant #1 K01 HL103173-01).

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